

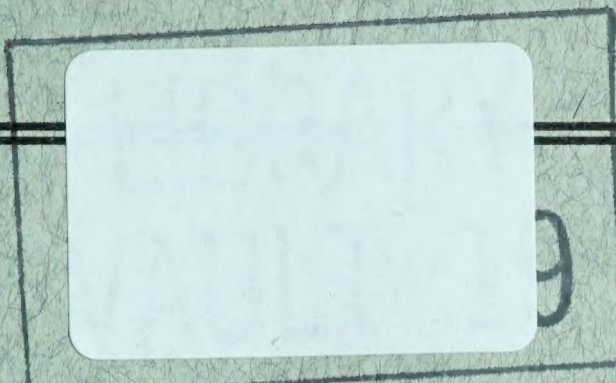
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PROVINCE OF ALBERTA

FINAL REPORT

OF THE

LEGISLATIVE COMMISSION

APPOINTED TO

- (a) Consider and make recommendations to the next Session of the Legislature as to the best method of making adequate medical and health services available to all the people of Alberta.
- (b) Report as to the financial arrangements which will be required on an actuarial basis to ensure the same.

Published by Authority of the
HON. GEORGE HOADLEY, MINISTER OF HEALTH

EDMONTON:
Printed by W. D. McLean, King's Printer
1934

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PROVINCE OF ALBERTA

FINAL REPORT

OF THE

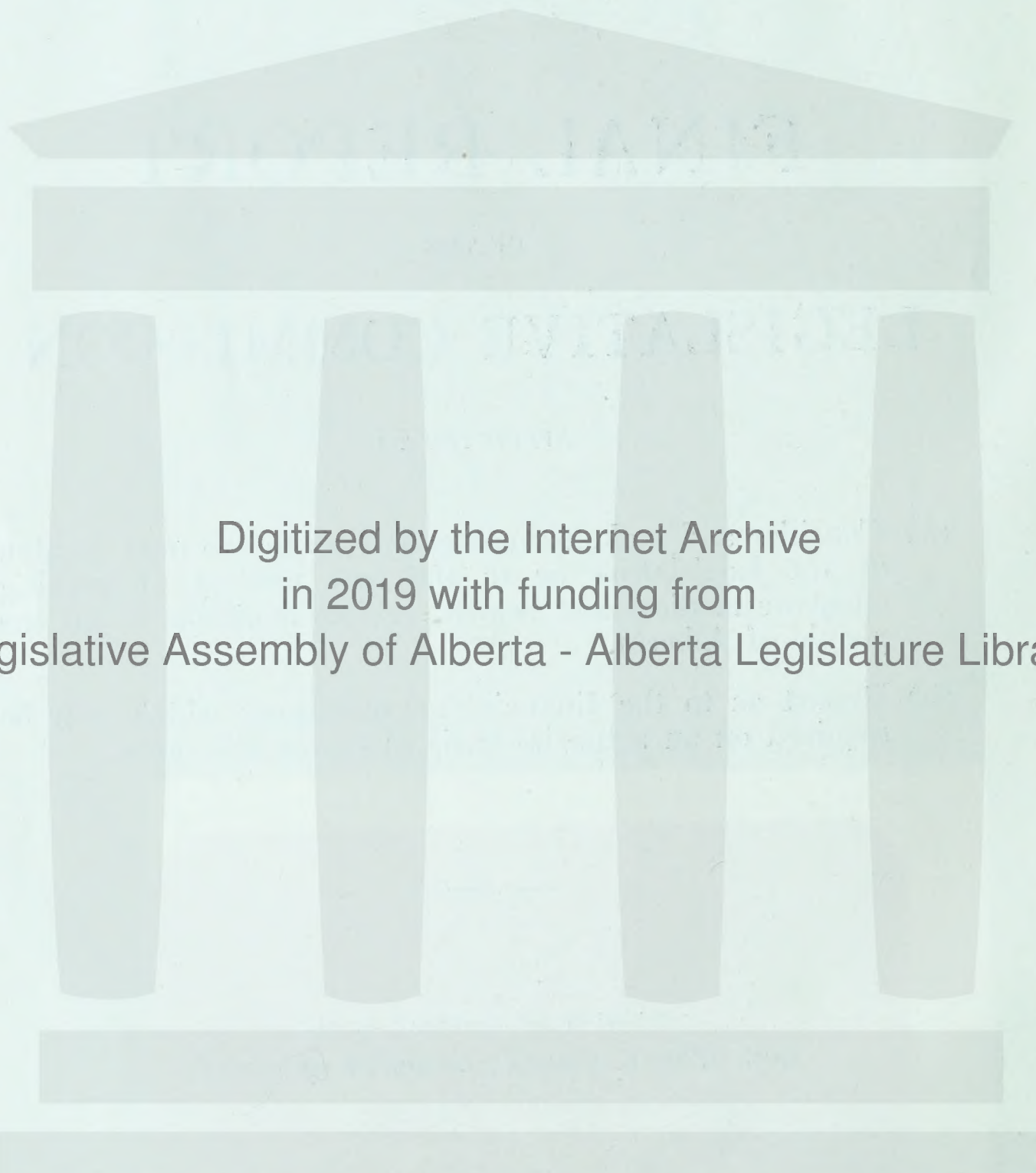
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COPY OF THE RESOLUTION.

Moved by Mr. C. Pattinson and seconded by Mr. F. White and unanimously agreed to by the Legislative Assembly of Alberta in Session 1932.

WHEREAS, rising out of a resolution adopted by this Legislature, information has been collected and presented on the subjects of State Medicine and State Health Insurance;

NOW, THEREFORE, be it resolved that this Government is hereby instructed to appoint a Commission, consisting of at least five members of this Legislature, for the purpose of:

- (a) Considering and making recommendations to the next Session, as to the best methods of making adequate medical and health services available to all the people of Alberta;
- (b) Reporting as to the financial arrangements which will be required on an actuarial basis to ensure the same.

COPY OF THE ORDER IN COUNCIL APPOINTING
THE COMMISSION

(O.C. 914/32)

Approved and Ordered.

(Signed) W. L. WALSH,
Lieutenant Governor.

(EXTRACT)

The Executive Council has had under consideration the report of the Honourable the Minister of Health, dated October 14th, 1932, stating that by a resolution of the Legislative Assembly of the Province, passed on the 3rd day of March, 1932, it was resolved as follows:

“WHEREAS, arising out of a resolution adopted by the Legislature, information has been collected and presented on the subject of State Medicine and Health Insurance; now, therefore, be it resolved, that this Government is hereby instructed to appoint a Commission consisting of at least five members of this Legislature for the purpose of:

- (a) Considering and making recommendations to the next Session, as to the best method of making adequate medical and health services available to all the people of Alberta;
- (b) Reporting as to the financial arrangements which will be required on an actuarial basis to ensure the same.”

THEREFORE, upon the recommendation of the Honourable the Minister of Health, the Executive Council advises that, in conformity with such resolution a Commission be and is hereby appointed, consisting of eight members of the Legislature, namely:

THE HONOURABLE GEORGE HOADLEY, Okotoks (Chairman).

THE HONOURABLE MRS. I. PARLBY, Alix.

C. PATTINSON, Edson.

DR. W. A. ATKINSON, Edmonton.

G. E. CRUICKSHANK, Hillcrest.

A. P. MITCHELL, Millet.

R. HENNIG, Fort Saskatchewan.

W. G. FARQUHARSON, Provost.

To

HIS HONOUR THE LIEUTENANT GOVERNOR IN COUNCIL.

YOUR HONOUR:

The Commission appointed by Order in Council No. 914 of the year 1932, in pursuance of a resolution passed by the Legislative Assembly on the third day of March, 1932, begs leave to report finally as follows:

INTRODUCTION.

In the year 1933 your Commission presented its first report—a progress report only. In order to focus the reader's attention on certain phases of the question of the extension of medical and allied services the report was made as brief as was consistent with clarity.

In this report certain phases of the problem, suggested in the resolution under which your Commission was appointed, have been elaborated and some of the material presented in the progress report has been left out of this report. A knowledge of the progress report, therefore, is a pre-requisite to the understanding of this report.

In presenting this as a final report, your Commission wishes to represent that the report is final only in so far as the Commission is concerned. Undoubtedly, experience will reveal certain aspects of the question and certain problems that have not been dealt with in this report.

TERMS.

Whenever the following terms are used in this report, they may be interpreted as defined below:

Medical Services:

"Medical services," "health services," and "medical facilities" mean all the sciences and arts, institutions and devices, founded on a sound, acceptable, scientific basis, that have for their purpose the prevention and cure of disease.

State Medicine:

"State Medicine" means a system of medical administration by which the state provides medical services for the entire population, and under which all practitioners are employed, directed and paid by the state on a salary basis.

State Health Insurance:

"State Health Insurance" means a system of state insurance for health purposes. Under a system of health insurance a non-profit earning, state-supervised organization administers a fund, provided through regular periodic contributions, for the mutual provision of medical services for the beneficiaries included under the system.

THE RESOLUTION.

The resolution appears to present certain definite problems for investigation, namely:

- (1) What would constitute a reasonably adequate medical and health service for the people of Alberta?
- (2) To what extent are the medical and allied services existing in this Province adequate?
- (3) To what extent are existing health facilities available?
- (4) What is the best method of making adequate medical services available to all the people of Alberta?
- (5) How can such a method or scheme be financed?

The resolution is concerned with "making adequate medical services available to *all* the people of Alberta." The social implications of the resolution are recognized and accepted. Your Commission realizes that the task of making practicable recommendations for the provision of adequate medical services is a difficult one, and that the question is not simply one of the provision of medical services, but that in its ramifications it is intimately associated with every aspect of our national life. The resolution infers the socialization of medicine. The proposal is not without precedent. The state at present is endeavouring to provide such educational facilities as are considered adequate for the children of the state. A similar endeavour is being made to provide care for the mentally diseased and deficient. Some provision has been made for the aged poor, and at the present time an attempt is being made to provide the unemployed with some of the necessities of life.

If these types of service are to be maintained and expanded, then provision must be made for them on an insurance basis. One form of contributory insurance that will be required is Health Insurance.

CHAPTER I.

AN ADEQUATE MEDICAL SERVICE.

In a relatively sparsely settled area such as the Province of Alberta it is neither possible nor practicable to supply all the medical needs of all the people at once. Nevertheless, it is desirable that what may be considered an adequate service be outlined for those areas where the population is sufficient to warrant such service. This type of service might be considered as the ultimate objective for every area when the development of that area is such as to warrant its provision.

Medical services should be regarded from the point of view of their quality and quantity.

The quality will remain high as long as the study of the medical sciences continues to attract the right type of individual. If we wish to attract or retain the well trained practitioners in this Province, then whatever system we employ should provide for suitable conditions under which they may work. These conditions, economic and otherwise, should be at least as attractive here as elsewhere.

We consider that if a high quality of medical service is to be maintained, training in the pure and applied elementary sciences should be continued, and at least one year of post-graduate work should be required as preparatory to a licensing examination which should stress the art of medicine. Time and opportunity for post-graduate studies should be provided, and examinations should be conducted at five-year intervals to determine whether or not the practitioner is keeping in touch with the recent information pertaining to the practice of his profession.

We consider that the course of studies should be so designed as to equip practitioners to provide all ordinary medical and surgical services except those that require long practice for special information and technique. We believe that the general practitioner should be retained as the family physician in order that a close personal contact may be maintained between physician and patient.

We consider that specialization is an essential feature of any progressive organization, and in order that the interests of the public and those specializing be safeguarded, we consider it essential that existing statutory provision for the certification of specialists be enforced rigidly.

We consider that in order to receive and retain specialist standing, a practitioner should be required to limit his practise to the work included in his specialty.

Quantity.

The number of people per practitioner-unit, whether that unit be medical, dental or nursing, and the number of persons per hospital bed depends upon a number of factors, some of the more important of which are:

- (1) The morbidity or sickness rate of the group concerned. This rate is rather constant for large groups. It is 7.2 or 7.3 days per capita per year.
- (2) The habits and customs of the group concerned, in the matter of using medical services.

(3) The economic ability of members of the group to avail themselves of medical services.

(See Chapter II for existing services in Alberta.)

MEDICAL SERVICES.

Physicians and Surgeons.

In some of the states of the United States where the climate and living conditions are particularly attractive and where the per capita wealth is high, there are from 575 to 625 persons for each practising physician. The "per-physician" population ranges all the way from this number to about 1,425 in other states.

Usually the ratio of one physician to each 850 of population is considered as about ideal. In Alberta a ratio of one physician to each 1,000 of population would be, in our opinion, adequate.

Dentists.

An adequate "per-dentist" population is usually considered as twice the "per-physician" population. This ratio holds in the above mentioned states where the more happily situated have one dental practitioner to each 1,000 of population, and the others have ratios ranging down to the states that are provided with only one dentist to each 5,000 of population.

We consider that a ratio of 2,000 persons per dentist would be a suitable one for Alberta.

Nurses.

The "per-nurse" population may be placed at one-half the per-physician population, or at a ratio of one nurse for every 500 of population.

Hospital Beds.

The minimum requirement for hospital service has been placed at one bed for every 300 persons to be served. The optimum consistent with efficiency has been placed at one bed for every 250 of population.

The above outline represents a rather complete basis for adequate treatment service. Your Commission realizes that the standards suggested are beyond the individual resources of the Province. Whether or not they are within the collective resources of the Province is a matter for consideration.

PREVENTIVE MEDICINE.

Your Commission wishes to express their conviction that any system of medical administration which does not make provision for prevention cannot function in the best interests of the insured.

Prevention lies at the very base of any efficient health structure, and all preventive and curative health services must be closely co-ordinated if efficiency is to be maintained.

It has been estimated that the annual cost of preventable illnesses in the Dominion of Canada (exclusive of loss of time and production) is \$50,000,000. Alberta's share of this preventable loss is about \$3,400,000.

An analysis of our public health vote reveals the fact that about eighty-seven per cent. of it is in reality a public sickness vote and that the remaining thirteen per cent. is available for preventive work and central administration charges.

The care of our mentally diseased and mentally deficient requires some \$614,000 per year or about forty-two per cent. of the total vote. Grants to hospitals use some \$407,000 per year or about twenty-eight per cent. of the vote.

The Central Alberta Sanatorium requires about another \$212,000, or fourteen per cent. of the vote.

Facilities for the care of the mentally deficient and also for the care of those suffering from tuberculosis are inadequate at the present time.

In order to protect the contacts of individuals suffering from tuberculosis, it is imperative that patients be hospitalized so that they may be treated and may be taught how to avoid infecting others.

There are ever increasing demands from the people for better institutional facilities for those requiring institutional care.

If the mounting costs of public sickness continue at their present rate, it is probable that the day will come when there will not be enough people physically and mentally well to bear the economic burden of taking care of the physically and mentally sick.

It would serve no useful purpose to present this problem if there were no solution. Your Commission believes that the solution lies in provision for a wider application of the principles of prevention, as they apply both to physical and mental diseases.

Psychiatrists have stated that about four per cent. of our school population are potential patients for mental institutions. But they also assure us that a high percentage of those patients now in mental institutions need not have been in these institutions had all the known principles of mental disease prevention been applied.

From our own Provincial statistics we can learn what may be done in the prevention of physical diseases.

Typhoid fever statistics are regarded as an important indication of the progress of public health activities in any community.

The following table indicates the progress that has been made in combatting this disease in Alberta over a nineteen-year period.

TYPHOID FEVER IN ALBERTA, 1913-1931

Number and Rates per 100,000 population					
Year	Population.	No. of Cases.	Morbidity Rate.	No. of Deaths.	Mortality Rate.
1913	423,187	638	152	161	38
1914	447,633	347	77	79	18
1915	472,079	284	60	58	12
1916	496,442	308	60	63	13
1917	514,911	127	25	42	8
1918	534,000	130	24	55	10
1919	554,000	187	34	67	12
1920	571,000	285	50	84	15
1921	588,454	177	30	65	11
1922	588,454	169	28	57	10
1923	588,454	155	26	44	7
1924	590,000	98	16.	26	4
1925	600,000	127	21	27	5
1926	607,584	127	21	18	3
1927	620,000	75	12	23	4
1928	633,000	122	19	26	4
1929	646,000	114	17	31	5
1930	660,000	69	10	16	2
1931	731,605	42	5	16	2

A study of the above table will reveal the fact that typhoid fever has been steadily on the decrease during the past nineteen years. For every individual reported as having contracted the disease in 1931, fifteen were reported in 1913, and for each death from typhoid fever in 1931 there were ten deaths in 1913. When these figures are corrected for the increase in population over this period, 1913 to 1931, for every case of the disease occurring in 1931 there were thirty cases in 1913, and for every death reported in 1931 there were nineteen deaths in 1913.

Such progress has been made possible by the united efforts of research groups, sanitary engineers, epidemiologists, and, in fact, every individual concerned in the prevention of disease.

Had the rate for the worst year (1913) maintained in 1931, instead of forty-two cases we would have had 1,111, and instead of sixteen deaths we would have had 277.

This represents a saving of 1,069 cases and 261 deaths.

The lowest cost of hospital and medical care of a typhoid fever case for one month would be \$100. In dollars, the reduction in cases represents a saving of \$106,900 in the cost of medical care. A large portion of this cost would have been a charge on the state. The amount saved is almost as large as the amount available for preventive purposes in our Provincial vote. No attempt has been made to estimate the value of the time lost. Two hundred and sixty-one deaths averted, represents a very large sum of money, more especially as typhoid fever is a disease most prevalent during the productive period of man's life.

The dividends from diphtheria prevention are as great as from typhoid fever. The following table outlines a ten-year period in Alberta:

DIPHTHERIA IN ALBERTA, 1922-1931

Year.	Population.	Cases.	Deaths.	Morbidity.	Mortality.
1922	588,454	732	121	124	30
1923*	588,454	832	82	141	14
1924	590,000	758	100	128	17
1925†	600,000	395	62	66	10
1926	607,584	260	60	43	10
1927	620,000	235	18	38	3
1928	633,000	485	50	77	8
1929	646,000	578	64	88	10
1930	660,000	269	30	40	4.5
1931	731,605	151	26	20	2.7

*Toxin-Antitoxin administration commenced in 1923.

†Toxoid administration started in 1925.

When these figures are corrected for increase in population, it will be noted that had the rate for 1922 maintained in 1931, instead of having had 151 cases we would have had 907 cases of the disease.

Had the rate been as high in 1931 as it was in 1922, instead of having had 26 deaths from diphtheria we would have had 146.

It will be noted that there was a potential prevention of 756 cases in 1931 over the 1922 rate, and at a cost of \$100 per case there was a potential saving of \$75,600.

The progress that has been made with typhoid fever and diphtheria is indicative of what has been and can be done in the control of other diseases.

There are some 250,000 children of school and pre-school age in this Province. There is a full-time preventive health service available to about 75,000 of them.

When the individual, the municipality, and the state are prepared to practise in fact what the thinking among them admit in principle, namely, that the most effective way to deal with disease is to prevent it, then we shall have started on the road towards adequate medical service for the people of Alberta.

For the provision of a public health service in rural Alberta we recommend an organization and set-up similar to that in the Red Deer and Okotoks-High River Full-Time Health Districts, which have been operating and giving a very fine type of public health service since June, 1931.

For purposes of illustration we offer an outline summary of the Red Deer organization.

The Red Deer unit consists of five Municipal Districts, namely: M.D. of Crown No. 399, M.D. of Lorne No. 400, M.D. of Pine Lake No. 339, M.D. of Golden West No. 371, and the M.D. of Arthur No. 340. The unit also has within its boundaries the city of Red Deer, the towns of Lacombe and Innisfail, and the following villages: Bentley, Blackfalds, Eckville, North Red Deer, Sylvan Lake, Penhold and Bowden.

The population of the district is now approximately 19,000, of which about 4,200 are school children.

The total assessment of the municipalities included in this unit is approximately \$17,811,000.

If the entire cost of the service were borne by the municipalities served, the required mill rate would be 4/10 of a mill, or a per capita cost of 58 cents. At present the municipalities concerned bear one-quarter of this cost.

Each district is served by a full-time medical officer of health with special qualifications in public health work, two full-time public health nurses with special qualifications, a part-time sanitary inspector, and a part-time stenographer.

With organizations such as exist at Red Deer and Okotoks-High River, staffed with similarly qualified doctors and nurses, we could expect the same good results in other health districts established in the Province.

Such full-time health units could be utilized as the administrative centres for each unit of the proposed health insurance scheme in the rural part of the Province.

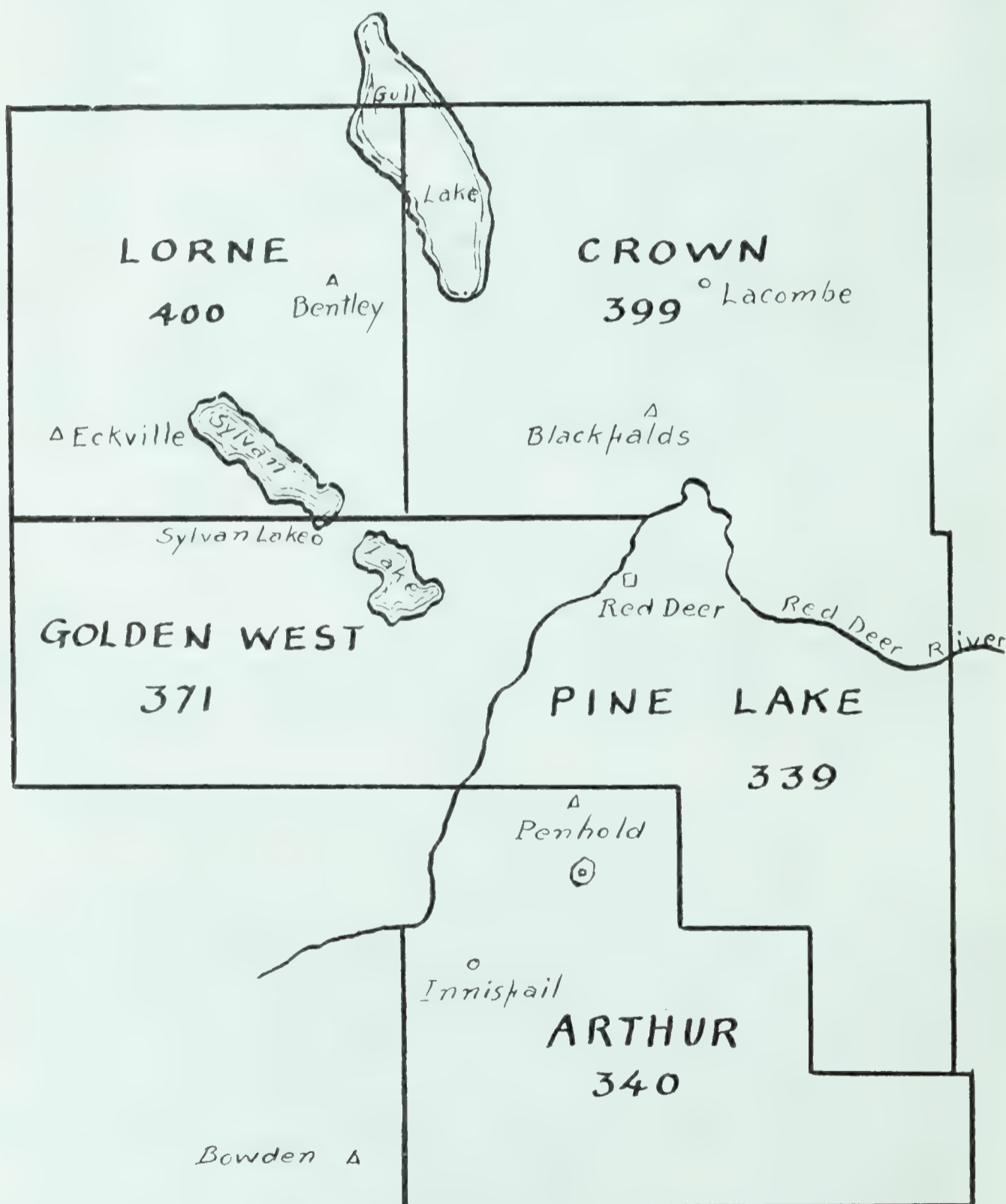
By this means co-ordination of all services would be assured. The physician practising curative medicine would be given the preventive point of view, and as the family physician, friend and counsellor of the family, would have an excellent opportunity to take his proper place in the preventive health programme of the district. He would be the adviser of the family during the pre-natal period, and would not be called, as is the case in so many instances under our present system, for the first time after some serious complication had developed.

He would assist the medical health officer at baby clinics, in the periodic physical examinations of children of school and pre-school age, in vaccinating and inoculating, and in life extension examinations of adults. Also he would provide the medical and surgical service required for the correction of the defects found in the above noted examinations.

Because the patient's fear of incurring expense would be eliminated, the physician would be called promptly when indications of contagious disease appeared in the family, school or community, and so many epidemics would be cut short instead of gaining the momentum they frequently do under the present system of health service or lack of service in some of the rural parts of the Province.

The laboratory service of the health district could also be made available to the clinician, and would be invaluable in assisting in the clinical diagnostic work.

With a trained staff in the field of preventive medicine, co-operating with the practitioner in curative medicine and with the assistance of community welfare organizations, the most complete type of medical service will be assured to the people of Alberta.



The Red Deer Full-Time Health District.

CHAPTER II.

EXISTING MEDICAL SERVICES

Existing Preventive Organizations.

Public health services in this Province are administered by boards of health in health districts. Each organized municipality—city, town, village or municipal district—constitutes a health district.

The Provincial Board of Health is responsible for making health regulations under The Health Act and for the general supervision of the public health of the Province.

Local boards of health are appointed in cities and towns, and in villages and municipal districts the board of health has the same personnel as the council.

Except in the larger cities, the health district is too small and has not the population to maintain a full-time preventive public health service. No other type of service can function with a maximum of efficiency.

In the expansion of health services we are confronted with a choice of two policies—centralization and decentralization. Under centralization all public health activities would be directly under the control of the Provincial Board of Health. While such a service might have many advantages, it is open to one adverse criticism, which is, in our opinion, insurmountable, namely—without local participation, interest in any scheme is lost. The project is regarded as a far-away activity of a central organization and of little local concern. Such an attitude is the reverse of what should be established. We must learn that disease prevention is of vital interest to the individual, the family and the community.

Under decentralization the Province would be divided into health districts large enough to maintain a full-time public health service. The district might be a combined one, comprising a small city or large town and the surrounding country, or might be rural, including the villages and towns within the boundaries of the municipal districts concerned.

In Chapter IV recommendations regarding a preventive medicine organization will be made.

Physicians and Surgeons.

Your Commission is indebted to the College of Physicians and Surgeons of the Province of Alberta for a survey of the situation as it concerns their profession. This survey was made in 1932. A few specialists have been certificated during 1933. A few doctors have registered in the Province, and a few have either died or left the Province during the year.

SURVEY, 1932

Total Registered in the Province	567
Total in Dominion and Provincial Service, including the University of Alberta	33
	<hr/> 534
Certificated Specialists:	
Eye, Ear, Nose and Throat	28
General Surgery	15
Pediatrics	7
Radiology	7
Psychiatric Medicine	5
Orthopaedic Surgery	3
Internal Medicine	6
Gynaecology and Obstetrics	2
Genito-urinary Surgery	3
Dermatology	2
Anaesthetics	2
Cardiology	1
Dermatology and Venereal Disease..	1
Gynaecological Surgery	1
Neurological Surgery	1
Obstetrical Surgery	1
	<hr/> 85

Of the 267 physicians practising outside Edmonton and Calgary, 119 are alone in villages and hamlets, and the remaining 148 are at points where two or more physicians are located.

Per physician population for 1932:

$$\frac{740,000}{567} = 1305.$$

On the basis outlined in the preceding chapter (one physician to each 1,000 persons) an ideal provision would require

$$\frac{740,000}{1,000} = 740 \text{ physicians.}$$

As indicated above, there are now 567 physicians practising in all branches of service in the Province. It is interesting to note that in the ten-year period ending 1932 there was a decrease of approximately twenty in the number of medical practitioners in the Province, although there was a population increase of 140,000 over the same period.

Distribution.

As regards the distribution of the physicians in the Province, the following information has been extracted from the submissions of the College of Physicians and Surgeons, to whom, as above noted, the Commission is indebted for this section of their report.

It is realized that physicians in centres draw their patients from great distances, and that the physician is not dependent on his locality for his entire practice.

APPENDIX

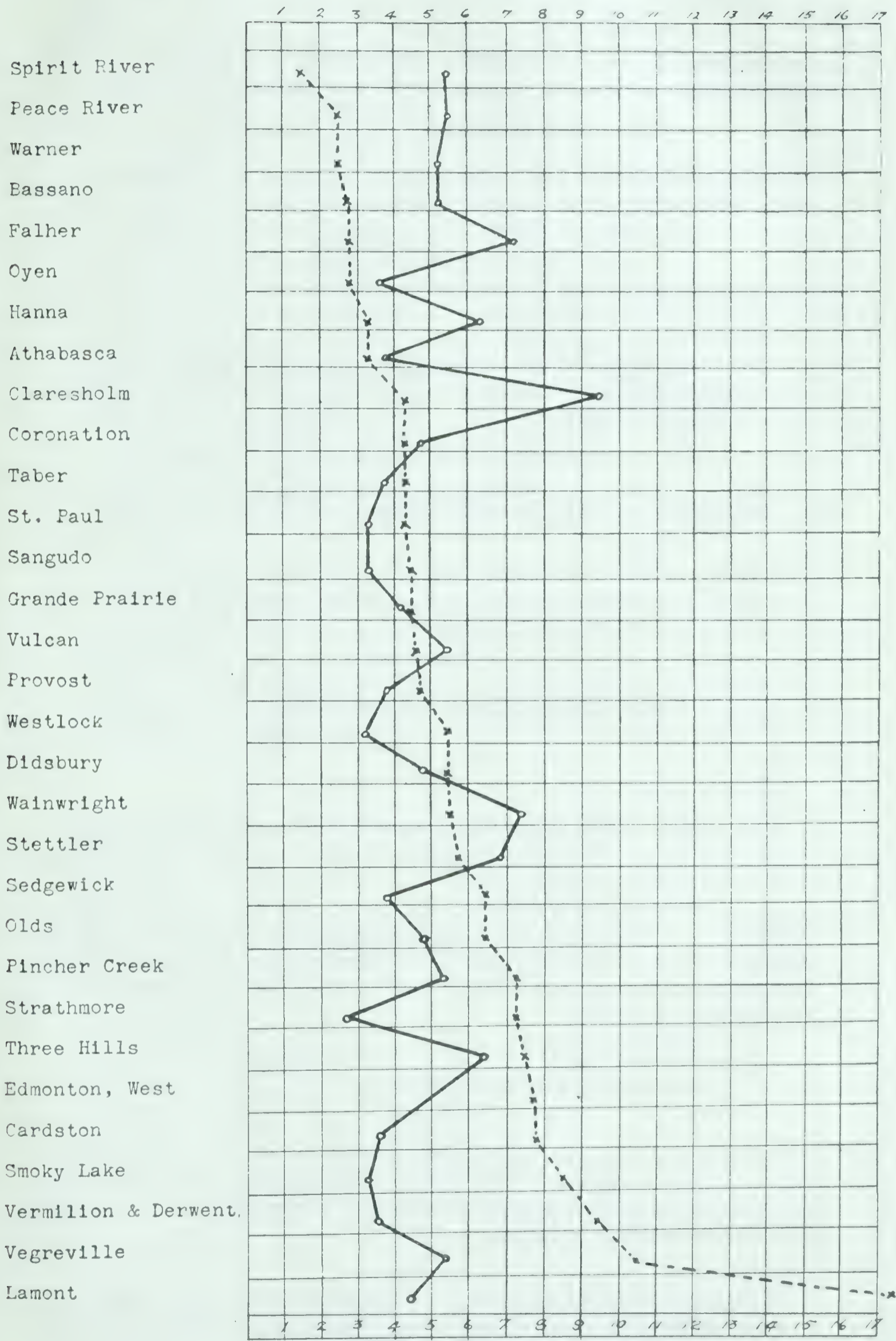
In this and the two pages which follow, certain facts are presented which may be of interest, which are designed to show the way in which many practitioners have settled throughout the Province. For the sake of convenience the proposed enlarged municipal areas are taken as a unit and their population in each case given; also their population per square mile; the number of doctors located in the area; and the number of people per doctor. And then for the sake of comparison the number of doctors per ten thousand people.

There has been no organized effort made by the medical council to have doctors located uniformly throughout the Province, although in an indirect way much effort has been expended, from time to time, in trying to see that no large area was left without medical attention, when there was any possibility of a doctor making a living in the area concerned.

It is obvious that the figures are somewhat misleading, particularly when one is considering areas which are situated in close proximity to any of the cities. Thus, in the Medicine Hat area with 7,783 people, there is no doctor living in the area outside of Medicine Hat, but there are ten living in Medicine Hat and supplying medical care to the rural areas in the vicinity of the city. This is more or less true as regards each of the areas which are contiguous to the cities.

In the chart which follows it is very evident that the combination of things which determined the location of doctors at various points in the Province was chiefly the financial status of the districts concerned, combined with the social customs of the various racial groups which comprise the bulk of the settlement in each area.

PROPOSED ENLARGED MUNICIPAL AREAS



Population per square mile - "x"
Doctors per ten thousand population - "o"

Dentists, 1932.

Dentists practising in cities	129
Dentists practising outside cities	97
Total.....	226

The total given here was that obtained for 1932, and is subject to such slight corrections as may have been necessary for 1933.

Per dentist population $\frac{740,000}{226} = 3274.$

Calculated on the basis estimated in Chapter I (one dentist to every 2,000 persons), the Province would require

$\frac{740,000}{2,000} = 370$ dentists,

or 144 more than are at present practising in the Province.

Nurses, 1932.

The Provincial Nurses' Association have advised that there are some 1,000 graduate nurses in the Province, of whom 673 are registered with the association.

Per graduate nurse population $\frac{740,000}{1,000} = 740$

In Chapter I it was estimated that an adequate ratio would be 500 persons to each graduate nurse.

Hospitals.

The last available information gave the following distribution for approved hospitals in the Province of Alberta:

Total approved hospitals			89
<hr/>			
Distribution:			
Sisters of Religious Organizations	27	Women's Institute	2
Protestant Church Organizations	8	Junior Red Cross	1
Municipal	22	Miners'	3
Community	8	Provincial	1
City	9		
Town	5		89
Privately Owned	3		

In the last survey made there were 3,373 hospital beds available in the Province. This number does not include infant beds or beds in non-approved hospitals.

It is usually considered that a ratio of one bed to each 300 of population to be served is the minimum of accommodation that is consistent with efficiency, and the American Hospital Association has recommended a ratio of one bed to each 250 of population as an optimum provision.

Beds available 3373

Beds required on 1/250 ratio $= \frac{740,000}{250} = \frac{2960}{413}$

It appears that there are some 413 hospital beds available in excess of our present population requirements, or that some $413 \times 250 = 103,250$ additional population is required to utilize our hospital bed accommodation.

Druggists.

From such information as is at hand it would appear that the number of druggists practising in the Province is sufficient to take care of the dispensing required in the Province.

EXISTING GROUP SCHEMES

Many of the larger industrial organizations have had some form of medical insurance over a period of years. Most of these schemes provide a degree of medical services on a contributory basis.

The students of the University of Alberta and some of the larger schools have used a form of insurance through a contribution to their Students' Union funds for many years.

The Municipal Hospital scheme is a form of hospital insurance.

Hospitals in the city of Edmonton are working at present on an insurance scheme for hospitalization.

Certain municipalities in the Province (see progress report) have schemes for medical and hospital services.

In conclusion, it appears that medical and allied services, with the exception of hospital services, are inadequate in the light of the requirements outlined in the preceding paragraphs.

It is a well known fact that even the existing services are not being utilized. Hospital beds are idle; physicians, dentists and nurses as groups could do more work than they are getting.

It is also a well known fact that the services that are being utilized are being paid for only in part.

From thirty-five to forty per cent. of all hospital accounts are not collectable.

From fifty to seventy-five per cent. of all medical accounts are not being collected.

It is evident that even the existing services are not within the individual resources of the Province.

Whether the existing or a more complete form of medical services are within the collective resources of the Province will be considered in Chapter IV.

CHAPTER III.

THE AVAILABILITY AND UTILIZATION OF
HEALTH SERVICES

Throughout the ages disease has been recognized as the greatest enemy of our race.

Countless thousands of scientists have given freely of their time and of their lives in the age-old struggle against disease.

Millionaires have given their millions freely to endow research institutions.

The progress of medical science in the past fifty years is something at which future generations will marvel.

Our failure to use the medical information and medical facilities which we have will be another matter at which future generations may marvel. The art of medicine has always lagged somewhat behind the science, and the utilization of our existing medical facilities is very incomplete indeed. Each year in this Province some 17,000 babies are born, and each year about 1,000 die in their first year. It is true that a decade ago, at the then existing infantile mortality rates, almost twice this number would have died, but even yet many of these deaths are preventable.

Each year we can count our premature deaths from preventable causes by the hundreds and our complications and incapacities by the thousands. In spite of the progress we have made in the control of communicable diseases, they are still all too frequent.

Perhaps three principal factors contribute to this failure to apply and use what we know. These factors are: ignorance, apathy, and the faulty administration of medical services and medical economics.

Ignorance and superstition have always been stumbling blocks in the progress of medical science, and they still are. Many are ignorant of the simplest principles in the art of healthful living, and many others have failed to distinguish between information which is scientific and that which is non-scientific. To enjoy health is one of man's greatest urges. On every hand there are unscrupulous individuals ready to capitalize that urge. Each year we, in the Province of Alberta, waste about five hundred thousand badly needed dollars on quack forms of treatment. Ignorance and gullibility usually are found together. It rests with health educationists to teach the principles of hygiene and educate in the science of living.

Apathy is another factor contributing to our unnecessarily high sickness and death rates. It is very difficult to interest anyone in maintaining his health while he is well. It is not until an epidemic is in our midst that we concern ourselves about means of protection against the disease.

Perhaps the main reason for our failure to use our existing medical services is an economic one. Medical care is postponed because many feel that they cannot afford the expenditure necessary to keep them well. It is not until discomfort or pain forces the individual to seek advice that he is persuaded to make the necessary expenditure. By that time the disease is usually serious and the expenditure great.

Aside from the usual illnesses of a relatively minor nature, every individual probably will be confronted at least once or twice in a lifetime with a more serious illness requiring either prolonged hospitalization or extensive medical or surgical treatment, or both. It is the cost of these major illnesses that cause such a strain on the individual's financial resources. Had this cost been provided for in the yearly budget over a period of years, the financial strain in any one year would not be a serious one.

It is the opinion of your Commission that adequate medical services will never be available to all the people of Alberta until income-earners, through a system of compulsory contribution, contribute a monthly sum sufficient to provide adequate medical services for all the people of the Province.

CHAPTER IV.

METHODS OF MAKING ADEQUATE MEDICAL SERVICES AVAILABLE TO ALL THE PEOPLE OF ALBERTA

In any insurance scheme there are certain general considerations which require attention.

The fundamental factor requisite for the success of any scheme is the participation of a number large enough to spread the risk so that the premiums received may be adequate to provide for the current expenditures and to provide a reserve fund for emergent situations.

There is no plan that ingenuity can devise that is abuse proof, and while any plan should be so arranged as to provide the minimum opportunity for abuse, honesty on the part of those participating in any scheme must be presupposed.

Any fund that is set up must be regarded as a community or state trust fund. Unreasonable and unnecessary demands on the part of those participating and the giving of unnecessary services on the part of those administering will destroy any scheme.

If there are any who are anticipating an improved medical service at the expense of someone else, or a free medical service, those people will be disappointed.

A suitable territorial "set-up" which will make the various purposes of any scheme possible from an economic as well as an administrative point of view, must be established.

The administrative unit should be large enough to assure economical administration and not so large as to lose that sense of local responsibility so necessary for the successful operation of any scheme.

Adjustments to suit local circumstances, such as exist where groups already have a health insurance scheme or a hospital service, will be desirable in some instances. However, we consider that every service included under the scheme must be directly subject to the control of and responsible to the governing body in charge of the scheme, and that no factor other than the type of service available should be given consideration in making such adjustments.

Health insurance must provide for a specified period only. The period must bear a direct ratio to the length of time an individual has been contributing to the scheme, otherwise, in its early stages, the financial structure of the scheme probably would not be equal to the strain of the cost of treating the accumulated chronic cases that would be presented for treatment.

A maximum of a stated period (say twenty-six weeks) during which the insured is entitled to what may be termed active hospitalization, should be established, except for certain types of sickness that may require more prolonged treatment in a general hospital.

For chronic and incurable diseases a system of invalidity insurance should be established, and institutions for such cases should be provided. Separate health insurance and invalidity funds should be maintained.

BASIS OF CONTRIBUTION

As the basis of contribution most health insurance schemes derive their revenue from:

1. The individual receiving the service;
2. His employer;
3. The state.

Under an ideal scheme the following basis of contribution is suggested:

For Employees:

Employee 5/9, Employer 2/9, State 2/9.

For Rural Municipal Schemes:

Municipality 7/9, State 2/9.

For Employers and Individuals engaged in Private Industry:

Individual 7/9, State 2/9.

For the Unemployed and Those Without Incomes:

At present there is statutory provision for the medical care of this group as a charge on municipal funds. In operation the provision is far from satisfactory. The cost of the care of this group should be a charge on the collective funds of any plan, and should be included in the budget of any scheme.

BENEFITS

All existing schemes include one or both of the following:

1. Benefits in kind.
2. Benefits in cash.

Benefits in Kind.

A complete service would include:

1. The regular general practitioner service of general medicine, minor surgery, obstetrics, etc.
2. Specialized service—special diagnostic services and major surgery.
3. Hospitalization and hospital facilities such as pathological laboratory services, X-ray laboratory services, etc.
4. Dental services.
5. Prescribed medicines, prescribed surgical appliances, etc.
6. A preventive medical service, that is, a public health service similar to that now available in the larger urban centres such as Edmonton and Calgary and the rural districts such as Okotoks-High River and Red Deer.

INSURANCE CARRIERS

The usual insurance carriers are:

1. Approved societies and insurance companies.
2. A state fund collected and administered by the state.
3. District mutual associations.

Your Commission recommends that a state fund, centrally controlled and administered by a state board, be established. It further recommends that local advisory committees be established for each unit.

PAYMENT FOR SERVICES

In considering the question of payment for medical and allied services, there are two plans which your Commission wish to recommend for your consideration.

The one is the "Contract-salary" system, whereby those whose services are required would be employed under contract on a salary basis to serve the community. Contracts for hospitalization might also be required.

There is no doubt that in the more remote and sparsely populated districts this system of payment is the only feasible one.

The other system of payment is the "Payment for Services Rendered" system, whereby the individual providing a service presents an account for that service.

Experience will teach us which system is best designed, both from a service and an economic point of view, to meet the needs of the particular district in which the scheme is to operate.

Where the "Payment for Services Rendered" system is in operation, we consider that the schedule of fees should be on a similar basis to that of the Workmen's Compensation Board, with provision for whatever adjustments may be necessary to meet particular situations.

For the guidance of those responsible for the preparation of this schedule, your Commission wishes to go on record as in favour of an adjusted schedule providing a more equitable ratio between the fees for medical and for surgical services; and between fees for general and specialized services. Your Commission is of the opinion that the existing schedule of fees for surgical and specialized services is too high.

THOSE INCLUDED UNDER ANY SCHEME

Under any plan all those residents in the area included in the scheme should be provided with a medical service.

PLANS

Your Commission recommends the consideration of the following plans:

Group One (for early application).

Group Two (for ultimate application).

GROUP ONE

Preventive.

1. That provision be made for the further expansion of the Provincial public health programme, more especially in the control of tuberculosis, the extension of public health nursing services, and the re-establishment of a travelling clinic service for those parts of the Province where a similar service is not provided.

2. That the Minister of Health be given statutory authority to constitute areas as Full-time Health Districts and to determine what proportion of the cost of the administration shall be borne locally and what proportion shall be borne by the Province.

Treatment.

1. That at least two demonstration "set-ups," one rural and one urban, be provided for the purpose of demonstrating a contributory health insurance scheme.

2. That municipal districts be urged to avail themselves of the statutory provision whereby municipalities may make grants to physicians.

Municipal Doctor Scheme.

Your Committee wishes to point out that for some time statutory provision whereby municipalities may make grants to physicians has existed. (Section 160, The Municipal District Act.)

Also, enabling legislation whereby municipal districts or parts thereof may unite for the purpose of providing health services exists under section 145 of The Municipal District Act and the 1930 Amendments.

Your Committee would recommend that municipal districts avail themselves of the legislation now in force, to provide more adequate services for their ratepayers until a Province-wide or possibly a national system of health administration is established.

Costs of the Municipal Doctor Scheme.

The costs of a municipal doctor scheme will vary with the type of service provided.

If it is expected that the doctor engaged will perform the services of a general practitioner, the cost for medical services will be about \$4,000 per year.

If it is expected that all surgery described as general surgery will be provided, the cost for medical services will be about \$5,000 per year.

On an average assessment of an average municipality (\$3,000,000), the mill rate would be:

$$\frac{5,000,000}{3,000,000} \times 1 \text{ mill} = 1\frac{2}{3} \text{ mills.}$$

On a quarter section assessed at \$3,000, the tax would be:

$$\frac{\$3,000}{\$1,000} \times 1\frac{2}{3} = \$5.$$

3. That municipal hospital districts be urged to elaborate the municipal medical scheme with the hospital district as a basis for organization.

The Municipal Hospital District Medical Scheme.

Your Commission considers that the present municipal hospital district offers a suitable administrative basis for the elaboration of the municipal doctor scheme, always keeping in mind its ultimate inclusion in the larger scheme above mentioned.

At present the average cost per acre of the municipal hospital is three cents.

A representative municipal hospital district has a population of about 3,600 and an assessable acreage of about 350,000 acres.

Such a district could be served by a well trained surgeon and a general practitioner, at a cost of about \$9,500 in salaries and \$1,500

in travelling expenses, or an additional cost of about three cents per acre. About \$9.60 per quarter section would cover the cost of medical and hospital service.

Not infrequently the ratepayer with large property holdings and perhaps a small family, complains of the apparent injustice of having to pay a much higher tax for this type of service than the ratepayer with relatively small property holdings and possibly a large family to receive hospital and medical services.

Your Commission wishes to suggest, for your consideration, a plan whereby in their opinion a more equitable ratio between the value of the services received and the amount expended might be established.

The home quarter section owned by an individual might be taxed on a fixed levy basis so arranged that the product of the number of home quarter sections times the levy would yield the desired percentage of the total cost of the service (see illustration following).

Additional holdings would then be taxed at a lower rate per quarter section, on a sliding scale basis.

It is realized that every district will present a somewhat different problem in respect to the number of home quarter sections it contains.

The tables following illustrate the variations in the size of holdings in representative sections of different parts of the Province.

It will be noted that the southern part of the Province has much larger farms than the central sections north and east of Edmonton.

District.	Percentage.	Size of Farm.
1. East of Edmonton.....	60 holding	1/4 section
	25 "	1/2 section
	10 "	3/4 section
	4 "	1 section
	1 " over	1 section
	100	
2. North of Edmonton.....	60 holding	1/4 section
	27 "	1/2 section
	5 "	3/4 section
	3 "	1 section
	5 " over	1 section
	100	
3. South-east of Edmonton.....	40 holding	1/4 section
	39 "	1/2 section
	10 "	3/4 section
	7 "	1 section
	4 " over	1 section
	100	
4. Central Alberta.....	44 holding	1/4 section
	30 "	1/2 section
	14 "	3/4 section
	6 "	1 section
	6 " over	1 section
	100	
5. Eastern Central	19 holding	1/4 section
	33 "	1/2 section
	22 "	3/4 section
	15 "	1 section
	11 " over	1 section
	100	
6. South of Calgary	20 holding	1/4 section
	26 "	1/2 section
	16 "	3/4 section
	17 "	1 section
	21 " over	1 section
	100	

Using district number 1 for illustration purposes, and using a district of 2,200 taxable quarter sections as a representative hospital district, and estimating the cost for medical and hospital services at an average of \$10 per quarter section, the district would have to raise \$22,000.

On the percentage basis above outlined there would be:

(1)	1,320— $\frac{1}{4}$ section farms.
(2)	550— $\frac{1}{2}$ section farms.
(3)	220— $\frac{3}{4}$ section farms.
(4)	88—1 section farms.
(5)	22—farms over 1 section.
	<hr/>
	2,200
	<hr/>

Reserving one quarter section as the home quarter, the division of the above farms would be as follows:

		Home Quarter	First	Additional Second	Quarter Third	Sections Over Three
(1)	1,320	1,320				
(2)	550	275	275			
(3)	220	73	73	74		
(4)	88	22	22	22	22	
(5)	22	4	4	4	5	5
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		1,694	374	100	27	5
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

In a district such as this one with a high proportion of home quarters, suppose the following apportionment of the costs to have been made:

Home Quarter—90 % of the total cost of scheme,
First Additional Quarter—9 % of the total cost of scheme,
Second Additional Quarter— $\frac{7}{8}$ of 1 % of the total cost of scheme,
Third Additional Quarter— $\frac{1}{8}$ of 1 % of the total cost of scheme,

then the levies to the nearest multiple of five would be as follows:

Home Quarter—1/1,694 of 90 % of \$22,000=\$11.70
First Additional Quarter—1/374 of 9 % of \$22,000=\$5.30.
Second Additional Quarter—1/100 of $\frac{7}{8}$ % of \$22,000=\$1.92.
Third and each Additional Quarter—1/32 of $\frac{1}{8}$ % of \$22,000=\$0.85.

1,694 @ \$11.70	=	\$19,819.80
374 @ 5.30	=	1,982.20
100 @ 1.92	=	192.00
32 @ 0.85	=	27.20
		<hr/>
		\$22,021.20
		<hr/>

District number 6, where the percentage of home sections is low, presents a contrast to district number 1, and shows that each district would have to be treated as a separate problem in adjusting costs on this basis. Again using for illustrative purposes a hospital district of 2,200 taxable quarter sections requiring \$22,000 to finance a hospital and medical service, we offer the following tables for consideration.

On the percentage basis indicated in table 6, there would be:

(1)	440— $\frac{1}{4}$ section farms.
(2)	572— $\frac{1}{2}$ section farms.
(3)	352— $\frac{3}{4}$ section farms.
(4)	374—1 section farms.
(5)	462—farms over 1 section.

Reserving one quarter section as the home section, the division of the above farms would be as follows:

		Home Quarter	First	Additional Second	Quarter Third	Sections Over Three
(1)	440	440				
(2)	572	286	286			
(3)	352	117	117	118		
(4)	374	93	93	94	94	
(5)	462	92	92	92	93	93
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		1,028	588	304	187	93
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

In the more sparsely settled districts such as this one, with a low proportion of home quarters, suppose the following apportionment of the costs to have been made:

Home Quarter—70 % of the total cost of scheme,
 First Additional Quarter—22½ % of the total cost of scheme,
 Second Additional Quarter—5 % of the total cost of scheme,
 Third Additional Quarter—2 % of the total cost of scheme,
 Fourth and each Additional Quarter—½ % of the total cost of scheme,

then the levies to the nearest multiple of five would be as follows:

Home Quarter—1/1,028 of 70 % of \$22,000=\$15.00.
 First Additional Quarter—1/588 of 22½ % of \$22,000=\$8.40.
 Second Additional Quarter—1/304 of 5 % of \$22,000=\$3.60.
 Third Additional Quarter—1/187 of 2 % of \$22,000=\$2.35.
 Fourth and each Additional Quarter—1/93 of ½ % of \$22,000=\$1.20.

SUMMARY

1,028 Quarters @	\$15.00	=	\$15,420.00
588 Quarters @	8.40	=	4,939.20
304 Quarters @	3.60	=	1,094.40
187 Quarters @	2.35	=	439.45
93 Quarters @	1.20	=	111.60
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\$22,004.65			
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GROUP TWO

(For ultimate adoption)

A Health Insurance Scheme.

Those included: The scheme should include every individual in the Province of Alberta who has established legal residence in the Province.

Those contributing: Every income-earner in the Province of Alberta shall contribute to the scheme.

Every employer, employing residents in the Province of Alberta, shall be required to contribute 2/5 of the amount required from the employee, or 2/9 of a sum which would be required from an income-earner were he paying the full amount indicated by his income status.

From the general revenue the Government of the Province of Alberta shall contribute 2/9 of the cost of the scheme. (See section, "Basis of Contribution.")

Organization and Administration of Urban Units.

In those urban municipalities large enough to support a complete full-time preventive service (cities with over 20,000 population and now including only Edmonton and Calgary), a full-time public health service should be maintained either, as at present, through taxation or incorporated in this scheme and a charge thereon.

Responsibility for collecting the contributions required under this scheme should rest on the urban units concerned, and the collection costs should be a charge on the administration costs of the scheme.

Contributions should be deducted from the wages of the wage-earners included under this scheme and collected from the employers with the employers' contributions. Contributions of income-earners, other than wage-earners, should be a direct taxation charge against the source of income.

Combined Units.

The rest of the Province, not included under the urban units, should be organized into combined units, consisting of the smaller cities, towns and villages and the rural districts tributary to these urban centres.

Obviously the area of these units will vary with the population, but they should be so designed as to have a population of approximately not less than 15,000 nor more than 30,000 people.

Each combined unit should have adequate local facilities for a complete treatment and preventive medical service.

Each combined unit would be subdivided into medical districts on an area-population basis (say 1,500 population \times 32 square miles), and would be served by a local practitioner.

In a new Province such as Alberta, for a number of years, there will be frontier districts too sparsely settled to warrant the above mentioned type of organization. Such districts may be served by practitioners on a salary, and in the more remote of the districts it may be feasible to maintain a nursing service only. Nurses in these districts require special training in first aid treatment and obstetrics, and should have frequent opportunities for post-graduate training in a University Obstetrical Hospital.

Both urban and combined units should elect local boards that could meet periodically to deal with matters of purely local interest and that could act in an advisory capacity to a Provincial board.

A central board, on which the various contributing groups would have representation, should be established to decide matters of important policy.

A central administration staff similar to that maintained by the Workmen's Compensation Board would be required.

Payment for medical services under this plan would be on a "services rendered" basis. The practitioners or institutions operating under the scheme would present their accounts to the above mentioned administrative staff for payment.

The central administrative staff would receive and disburse all funds collected, and would be subject to the control of the central Provincial board above mentioned.

The advantages of such a scheme are many:

1. An insurance principle would be established and the provision of medical care would be a collective responsibility. Costs and risks would be distributed over a large population and over a period of years.
2. A competitive type of medical service would be maintained, and a family practitioner type of service with provision for reference to consultants and specialists would be available.
3. A group type of practice around hospitals established in the above mentioned units would do away with much unnecessary duplication of equipment, and the practitioners would be able to obtain the benefit of the opinions of other members of the group.

The obvious disadvantages of the scheme are:

1. Individuals might make so many unnecessary demands on the scheme that it could not operate.
2. Practitioners might give unnecessary services under the scheme.
3. The administration costs of such a scheme would be high.

The objections are, in our opinion, not insurmountable. Education in the co-operative nature of the scheme would teach the great majority to be reasonable in their demands. Where education failed, abuse and fraud would be penalized.

The duplication of costs under our present system would exceed the administrative costs of the scheme many times.

The above plan is an outline of the scheme suggested in our progress report. No attempt has been made to deal with the details of the scheme, which are many. This is the scheme your Commission recommends as an ideal for the provision of adequate medical services for all the people of Alberta.

CHAPTER V. FINANCING

Costs of Scheme.

It is recognized that any attempt at arriving at the cost of a medical insurance scheme must be at best only a more or less close approximation.

In those sections of this report dealing with the Municipal Doctor Schemes and the Municipal Hospital Schemes, an estimate of the costs of a partial medical service has been given.

To get an estimate of the per capita cost of an insurance scheme we have used the following morbidity tables as the basis of our estimates.

There are no morbidity tables available for Alberta, as only the communicable diseases are reportable. Morbidity rates have been based on the experience of the Geneva studies (League of Nations), and the rates used by insurance companies operating on this continent.

PER CENT. DISTRIBUTION OF THE POPULATION OF ALBERTA, 1931

Ages.	Males.	Females.	Ages.	Males.	Females.
0-4	9.91	11.69	55-59	3.52	2.66
5-9	10.17	12.19	60-64	2.48	1.94
10-14	10.11	11.78	65-69	1.70	1.42
15-19	9.41	11.01	70-74	1.15	.99
20-24	8.67	9.17	75-79 .....	.55	.52
25-29	8.22	7.56	80-84 .....	.23	.23
30-34	7.14	6.72	85-89 .....	.07	.08
35-39	7.07	6.57	90-94 .....	.01	.02
40-44	7.39	6.08	95-99 .....	....	.01
45-49	6.86	5.31	100 and over .....	....	....
50-54	5.31	4.07	Not stated .....	.02	.01

Population of Alberta, 1931 Census, 731,605.

Distribution—Males, 400,199; Females, 331,406.

For convenience in making calculations these figures have been reduced to the nearest thousand, viz.: Males 400,000 and females 332,000.

MORBIDITY TABLES SEGREGATED AS TO AGE GROUPS
MALES

Age.	No. of Persons	Rate	Total-Days' Incapacity
0-4	39,640	6.82	270,345
5-9	40,680	6.82	277,438
10-14	40,440	5.27	213,119
Total	120,760	6.31	760,902
15-19	37,640	5.22	196,480
20-24	34,680	5.68	196,982
25-29	32,880	5.96	195,645
30-34	28,560	6.30	179,928
35-39	28,280	6.78	191,738
40-44	29,560	7.41	219,040
45-49	27,440	8.47	232,417
50-54	21,240	9.58	203,479
55-59	14,080	11.44	161,075
60-64	9,920	14.03	139,177
65-69	6,800	16.56	112,608
Total	271,080	7.48	2,028,569
70-74	4,600	23.70	109,020
75-79	2,200	23.70	52,140
80-84	920	23.70	21,804
85-89	280	23.70	6,636
90-94	40	23.70	948
95-99 .....	.....	.....	.....
100 and over .....	.....	.....	.....
Total	8,040	23.70	190,548
Not stated	80	7.48	598
Total	*399,960	.....	2,980,617

*In calculating the per cent. distribution of population only two places of decimals were used, hence the discrepancy of 40 from the 400,000 basis used.

FEMALES (Excluding Confinements)

Age.	No. of Persons	Rate	Total-Days' Incapacity
0-4	38,810	4.85	186,328
5-9	40,470	4.85	196,279
10-14	39,109	4.85	189,678
Total	118,389	4.85	572,285
15-19	36,553	4.34	158,640
20-24	30,444	5.16	157,091
25-29	25,099	5.53	138,797
30-34	22,310	6.01	134,083
35-39	21,812	6.71	146,358
40-44	20,185	7.12	143,717
45-49	17,729	8.08	142,442
Total	174,032	5.86	1,021,128
50-54	13,512	8.60	116,203
55-59	8,831	9.21	81,333
60-64	6,440	10.44	67,233
65-69	4,714	12.92	61,104
Total	33,497	9.73	325,873
70-74	3,286	18.24	59,937
75-79	1,724	18.24	31,445
80-84	763	18.24	13,917
85-89	265	18.24	4,833
90-94	66	18.24	1,203
95-99	33	18.24	602
Total	6,137	18.24	111,937
Not stated	57	9.73	555
Total	*332,112	.....	2,031,778

*Explanation as in total for male group.

FEMALES (Including Confinements)

15-19	36,553	4.98	182,034
20-24	30,444	8.22	250,250
25-29	25,099	9.63	241,703
30-34	22,310	9.33	208,152
35-39	21,812	8.95	195,217
40-44	20,185	8.08	163,095
45-49	17,729	8.34	147,026
Total	174,032	7.97	1,387,477

The results of these computations show the following average rates of morbidity:

ALL AGES:			
Males	399,960	@ average of 7.45	=2,980,617
Females (excluding confinements)	332,112	@ average of 6.11	=2,031,778
<hr/>			
Total.....	732,072	@ average of 6.85	=5,012,395
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Males	399,960	@ average of 7.45	=2,980,617
Females (including confinements)	332,112	@ average of 7.22	=2,398,127
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Total.....	732,072	@ average of 7.35	=5,378,744
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AGES 15-69:			
Males	271,080	@ average of 7.48	=2,028,569
Females (excluding confinements)	207,529	@ average of 6.49	=1,347,001
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Total.....	478,609	@ average of 7.05	=3,375,570
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Males	271,080	@ average of 7.48	=2,028,569
Females (including confinements)	207,529	@ average of 8.26	=1,713,350
<hr/>			
Total.....	478,609	@ average of 7.82	=3,741,919
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HOSPITAL COSTS

Hospital costs have been determined by dividing the estimated annual total days' morbidity for the census year 1931 into the total annual hospital cost (exclusive of Provincial institutions) for the same year.

The total annual hospital costs for 1931, including operating, debenture and interest charges, were \$3,358,987.

As the expenditures made by the Workmen's Compensation Board would not be a charge on the proposed insurance scheme, the sum expended by that Board for hospitalization during 1931, namely, \$90,912, should be deducted. The balance is \$3,268,075.

The total annual days' morbidity for 1931 (see "all ages" table) was 5,378,744 morbidity days. The per morbidity-day hospital cost equals

$$\frac{3,268,075}{5,378,744} \times \$1.00 = \$0.6076.$$

To this 60.76 cents, there should be added at least ten per cent. for increased hospitalization under an insurance scheme which brings the estimated per morbidity cost to 66.836 cents.

While there is no thought at present of bringing our Provincial institutions under the proposed insurance scheme, if the annual cost of these institutions was added to the costs of approved hospitals, and if the Workmen's Compensation Board hospitalization costs were included, then the total cost would be \$4,185,000, or a morbidity-day cost of 77.80 cents. If 10% were added to cover an expected increase in the demand for hospital services, then the morbidity-day cost would be 85.60 cents. This estimate corresponds rather closely with the estimate in British Columbia's report computed on the same basis, namely, 84.47 cents.

MEDICAL COSTS

In order properly to compute medical costs a Provincial survey of costs would have to be made and information obtained from large representative groups regarding medical expenditures over a period of years.

Such a census undertaking would be expensive, and because very few keep long term records of such expenditures the information obtained probably would be incomplete and inaccurate.

An estimate of the probable costs for medical services in Alberta has been made as follows:

The number of physicians and surgeons practising in Alberta at the present time is about adequate to meet the requirements of the Province (one doctor to each 1,370 population). What was considered a fair average annual gross cash income for the various types of medical and surgical services available in the Province, was estimated. This sum was multiplied by the number engaged in each type of the service. From the sum thus obtained, the amount spent for medical and surgical services by the Workmen's Compensation Board in 1931 (\$125,299) was deducted.

The figure thus obtained, \$3,178,000, represents an estimate of the probable medical cost. On this basis the morbidity-day medical cost would be

$$\frac{3,178,000}{5,378,744} \times \$1.00 = \$0.5901.$$

In the British Columbia computations the League of Nations' tables for the cost of medical care in Austria were used as the basis for their calculations. Austrian rates were transposed into British Columbia rates and fees for the most prevalent illnesses were taken as a basis for comparison. The per capita, per diem cost thus obtained was 66.88 cents.

PHARMACEUTICAL SUPPLIES

Under pharmaceutical supplies prescribed drugs only have been included. The ordinary so-called "counter" drugs such as castor oil that may be purchased without a prescription and the patent drugs have not been included in this estimate.

It is estimated that the annual expenditure for the Province as above outlined would be about \$730,000 or a morbidity-day rate of

$$\frac{730,000}{5,378,744} \times \$1.00 = \$0.1357.$$

British Columbia used the per capita basis as derived from the National Health Insurance balance sheet as the basis for the calculations appearing in the British Columbia report. The figure obtained was 13.73 per capita per day's incapacitation.

DENTAL CARE

The estimated cost of dental services in the Province has been placed at \$1,500,000.

The morbidity-day cost of dental service on this estimate would be 27.88 cents.

This estimate is based on the presumption that under an insurance scheme there would be an increased demand of 20 per cent. over the present demand for dental services.

The probable cost of the service has been computed as was the medical cost. An estimate of what was considered as a fair average annual gross income for the different types of dental service was made, and this sum was multiplied by the number of dentists required to provide the service.

PREVENTIVE CARE

The cost for the provision of a preventive service at 65 cents per capita per annum is estimated at \$475,800.

This cost does not include the cost of hospitalization for communicable diseases, which has been provided for under general hospital costs, nor the cost of sanatoria, which probably would continue to be a charge on the Provincial Public Health vote.

FINANCIAL PLANS

With the use of the above statistics, the cost of any type of medical or allied services can be computed.

The resolution which your Commission was appointed to investigate calls for the provision of adequate medical and allied services for all the people of Alberta. The following plan is prepared on the presumption that the entire population of the Province will be included in the scheme:

PLAN A

Includes all the people of Alberta		
731,605 @ an average morbidity rate of 7.35 per capita: 5,377,296 days		
	Total Cost.	Per Capita.
5,377,296 days @ 66.83c for hospitals	\$3,593,647	\$4.91
5,377,296 days @ 59.01c for doctors	3,173,142	4.34
5,377,296 days @ 13.57c for drugs	729,699	0.99
5,377,296 days @ 27.88c for dentists	1,499,190	2.05
Preventive Care.....	475,800	0.65
	\$9,471,478	\$12.94
10 per cent. for administration\$ 947,147		
2 per cent. for Contingency Reserve 189,429		
	1,136,576	1.56
Total	\$10,608,054	\$14.50
Per Capita Cost: \$14.50 per year, or \$1.21 per month.		

This plan gives an estimate of the per capita cost of a rather complete type of medical service. Nursing costs have not been included, as they are in a large measure provided for in the hospital costs.

Since the hospital costs have been estimated on a basis of operation, capital and reserve charges, the Provincial Government would be relieved of the present hospital grant charge (about \$400,000 per annum).

On the basis referred to in this report an employee would be responsible for 5/9 of \$1.21 per month for each of his dependents and himself—67c per month.

An individual not an employee would be responsible for 7/9 of \$1.21 per month for each of his dependents and himself—94c per month.

According to the Dominion's statistician's formula, the average number dependent on one wage-earner's income is 2.4.

This number is not to be confused with the average number of persons to a family, which is 4.03. This latter figure cannot be used in these computations, as not infrequently there are more wage-earners than one in a family and a proportion of wage-earners are unmarried and have no dependents.

Under present economic conditions there are from four to five dependent on each worker's income.

A fair estimated ratio over a period of years might be one income to each unit of three.

On this basis an employee would be required to pay $3 \times 67c$ per month = \$2.01, and an individual not an employee would be required to pay $3 \times 94c$ per month = \$2.82.

To Summarize:

An employee, regardless of the number of his dependents, will be required to contribute \$2.01 per month to the scheme.

An individual not an employee, regardless of the number of his dependents, will be required to pay \$2.82 per month to the scheme.

PLAN B

Benefits for Employees only (Excluding Maternity)

In June, 1931, there were 142,090 wage-earners employed in the Province of Alberta. (Labour Gazette, Vol. XXXII, No. XI.)

142,090 employees at an average morbidity rate of 7.05 per capita per year (average applying to ages 15-69) equals 1,001,734 days.

	Total Cost.	Per Capita.		
1,001,734 days @ 66.83c for hospitals.....	\$ 669,458	\$ 4.70		
1,001,734 days @ 59.01c for doctors.....	591,123	4.16		
1,001,734 days @ 13.57c for drugs.....	135,935	0.95		
1,001,734 days @ 27.88c for dentists.....	279,283	1.96		
	<hr/>	<hr/>		
	\$1,675,799	\$11.77		
10 per cent. Administration	\$167,580			
2 per cent. for Contingency Reserve....	33,516			
	<hr/>			
	201,096	1.40		
	<hr/>	<hr/>		
Total.....	\$1,876,895	\$13.17		
	<hr/>	<hr/>		
Cost Distribution on a basis of:				
	State	Employer	Employee	Cost to
	2/9	2/9	5/9	Employee
Hospitals	*\$148,768	\$148,768	\$371,921	\$2.61
Medical doctors	131,361	131,361	328,402	2.31
Drugs	30,208	30,208	75,520	0.53
Dentists	62,062	62,062	155,160	1.09
	<hr/>	<hr/>	<hr/>	<hr/>
Total.....	\$372,399	\$372,399	\$931,033	\$6.54

Cost to each employee: \$6.54 per year, or 55 cents per month.

*As noted above, the Province would be relieved of the fifty cent per patient day hospital grant in the case of each insured employee as provision has been made in the estimate for total hospital costs.

At the present time ten per cent. of the population require hospitalization for approximately twelve days. Calculated on this basis, the Government grant for this group would be approximately \$85,000.

Plan B represents one of the most inexpensive plans available. It can be made even more so by the elimination of any of the services included therein, or it can be elaborated by the addition of any desired service or benefit.

Plan A provides a complete service for all the people of Alberta.

While we believe that our estimate of costs is a very close approximation, the statistical bases of the estimates have not been subjected to actuarial analysis.

CHAPTER VI.

CONCLUSION

Your Commission has reviewed the systems of medical administration in operation in various parts of the world, and has given careful consideration to the many phases of the extension of medical services, especially as they apply to the Province of Alberta.

In a relatively new Province such as Alberta, with a large proportion of the population engaged in farming and with many of the districts still in a pioneering stage, it appears that there is no scheme existing elsewhere that can be applied to the Province of Alberta as a whole.

Certain frontier areas that now exist or may be established will be unable to maintain a complete medical service. For the better developed of these districts we recommend the establishment of a state subsidized medical doctor, assisted by a nurse. Some of these districts might be served by a nursing service only. In these districts we believe that a travelling clinic can give the type of service in minor surgery best suited to the needs and resources of the district.

For the more thickly populated areas of the Province, the plan for a municipalized, medical insurance scheme as herein outlined is recommended.

STATE MEDICINE

At the beginning of their deliberations the first scheme considered by your Commission was a State Medicine Scheme. The administrative "set-up" was very similar to that proposed under the Health Insurance Scheme, outlined herein. Each practitioner under this scheme would be on a salary basis. The young practitioners would be assigned to the medical districts mentioned in the Health Insurance Scheme. From these districts they would be promoted to central points in the unit to do a referred hospital type of practice. From the central hospital of the combined unit some of the outstanding practitioners would be promoted to the Provincial hospitals situated at central points and designed to do the specialized work of the Province. No plan was presented for urban units under this scheme. This scheme has been referred to in the progress report as the "contract-salary" system, and as noted in that report, experience will teach us whether such a system of payment is suitable for areas other than the remote ones mentioned before in this report.

THE PANEL SYSTEM

The Panel System is the one operating in England. Under this system individuals elect the physician of their choice and place themselves under his panel. Recently provision has been made to facilitate changing from one panel to another.

The advantage of the system is in its simplicity of operation and administration.

The chief objections that have been recorded against the scheme are:

1. That certain physicians have panels so large that it is impossible for them to give efficient service.
2. That in order to obtain or retain individuals as members of a panel, unreasonable requests for benefits in cash or kind are met with unreasonable concessions.

Apparently, the first objection could be met by limiting the number in a panel, and the second objection would not maintain to a great degree in Alberta, as at present there is no provision for cash benefits in the scheme your Commission has proposed.

However, the panel system is, in our opinion, more suited to a purely industrial type of population than to the type that exists in Alberta. The system does not provide the benefits proposed under this scheme, and would not lend itself readily to a plan that proposes to provide hospitalization, dental care, specialist care, etc.

Consideration of various schemes as they affect industrial groups and existing medical services has occupied much of the time and attention of the Commission.

The financing of a scheme presents the most difficult problem with which your Commission has been confronted. Possible sources of revenue from both indirect and direct taxation have been investigated. Recommendations made herein represent the conclusions of your Commission regarding direct taxation.

During the year 1933 the College of Physicians and Surgeons sent out a questionnaire to the members of the medical profession. The questionnaire covered the more important phases of the whole question of the provision of more adequate medical services for the people of Alberta. About fifty per cent. of the profession replied. The majority supported the submissions already made from the college to this Commission in 1932. These submissions were published as a supplement to the progress report.

Your Commission wishes to express appreciation of the co-operation received from interested organizations and individuals.

All of which is respectfully submitted.

Signed:

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